

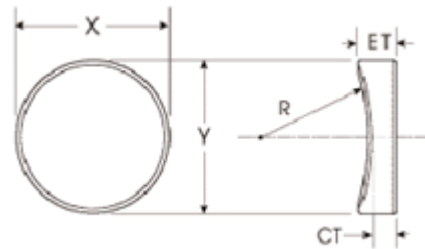
# SAPPHIRE PLANO-CONCAVE LENSES

Sapphire has excellent transmittance from the ultraviolet to the mid-infrared, it exhibits high thermal conductivity, and it has very high surface hardness, making it more resistant to scratches than BK7 or fused silica.

We supply uncoated but a range of anti-reflection coatings can be applied as well.

## Standard Specifications:

|                        |                                |
|------------------------|--------------------------------|
| Optical Material:      | Optical grade Sapphire Crystal |
| Diameter Tolerance:    | +0.0, -0.15mm                  |
| Design Wavelength:     | 546.10nm                       |
| Design Index:          | 1.7710 at 546.10nm             |
| Paraxial Focal Length: | ±2%                            |
| Centration:            | 3 arc minutes                  |
| Clear Aperture:        | >85%                           |
| Surface Quality:       | 40-20 scratch and dig          |
| Wavefront Distortion:  | $\lambda/2$ at 632.8nm         |
| Bevel:                 | <0.25mm X 45°                  |
| Coating:               | available upon request         |



## Standard Sapphire Plano-Concave Lenses:

| Dia(mm) | f(mm)  | R1(mm) | tc(mm) | te(mm) | Fb(mm) | Product Number |
|---------|--------|--------|--------|--------|--------|----------------|
| 5.0     | -5.0   | 3.86   | 2.0    | 2.9    | -3.9   | UQT-PLCAS0201  |
| 10.0    | -10.0  | 7.71   | 2.0    | 3.8    | -8.9   | UQT-PLCAS0202  |
| 10.0    | -20.0  | 15.42  | 2.0    | 2.8    | -18.4  | UQT-PLCAS0203  |
| 10.0    | -25.0  | 19.28  | 2.0    | 2.7    | -23.5  | UQT-PLCAS0204  |
| 20.0    | -50.0  | 38.55  | 2.0    | 3.3    | -48.1  | UQT-PLCAS0205  |
| 20.0    | -100.0 | 77.10  | 2.0    | 2.7    | -98.5  | UQT-PLCAS0206  |
| 20.0    | -150.0 | 115.65 | 2.0    | 2.4    | -148.6 | UQT-PLCAS0207  |
| 20.0    | -200.0 | 154.20 | 2.0    | 2.3    | -198.7 | UQT-PLCAS0208  |

Please Contact [ultiQuest](#) for other dimensions in prototype and production quantities.

## NOTES!

- The edge thicknesses are theoretical values not including chamfer.
- Be sure to wear laser safety goggles when checking optical path and adjusting optical axis.